

## **2009 World Congress Scientific Program**

### **Thursday, September 10, 2009**

**10:00 AM–12:00 PM    *Pre-Congress Workshop***  
**OARSI-FDA-INITIATIVE**

*Co-Chairs:* Steven B. Abramson, MD  
Marc C Hochberg, MD, MPH

*Faculty:* Robert Dworkin, PhD  
Claim of Symptomatic Relief Working Group

Victor Goldberg, MD  
Devices Working Group

David J. Hunter, MD, PhD  
Assessment of Structural Change Working Group

Joanne Jordan, MD, MPH  
Prevention Risk Reduction Working Group

Virginia Kraus, MD, PhD  
Biomarkers Working Group

Nancy Lane, MD  
Defining Disease State Working Group

**10:00 AM – 12:00 PM    *Pre-Congress Workshop***  
**OSTEOARTHRITIS INITIATIVE: ADVANCED TOPICS ON USE AND ANALYSIS OF  
THE OAI PUBLIC DATA**

10:00 am–10:30 am    **Research questions that can be addressed using OAI data: possibilities and limitations**  
*Michael C. Nevitt, PhD*

10:30 am–11:00 am    **OAI Online: access to clinical data, images and biospecimens, and data browsing tools**  
*Susan M. Rubin, MPH*

11:00 am–11:30 am    **OAI images and image-derived biomarkers**  
*John Lynch, PhD*

11:30 am–12:00 pm    **Longitudinal and hierarchical analytic strategies for OAI data**  
*Charles McCulloch, PhD*

### **Thursday, September 10, 2009**

**2:00 PM–2:10 PM    WELCOME FROM PRESIDENT AND CONGRESS CO-CHAIRS**

**2:10 PM–3:30 PM    *Plenary Session 1 – Biomarkers***  
**ROLE OF BIOMARKERS IN DIAGNOSIS AND MONITORING OF OA**

2:10 PM–2:30 PM    **Clinical Perspective on the Role of Biomarkers and the Diagnosis and Monitoring of OA**  
*Virginia Byers Kraus, MD, PhD*

2:30 PM–2:50 PM    **Basic Science Perspective on the Role of Biomarkers in the Diagnosis and Monitoring of OA**  
*Dick Heinegard, MD, PhD*

2:50 PM–3:00 PM    **Q & A**

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3:00 PM–3:15 PM	<b>001 NOVEL BIOMARKERS OF KNEE OSTEOARTHRITIS IDENTIFIED USING METABOLIC PROFILING</b> G. Zhai <sup>1</sup> , R. Wang-Sattler <sup>2</sup> , D. Hart <sup>1</sup> , T. Illig <sup>2</sup> , T.D. Spector <sup>1</sup> <sup>1</sup> King's Coll. London, London, United Kingdom; <sup>2</sup> Inst. of Epidemiology, Neuherberg, Germany	p. S9
3:15 PM–3:30 PM	<b>002 IDENTIFICATION OF A NOVEL HTRA1-SUSCEPTIBLE CLEAVAGE SITE IN HUMAN AGGRECAN: EVIDENCE FOR THE INVOLVEMENT OF HTRA1 IN AGGRECAN PROTEOLYSIS IN VIVO</b> A. Chamberland, E. Wang, A.R. Jones, E.A. Morris, C.R. Flannery, Z. Yang Wyeth Res., Cambridge, MA	p. S9
<b>4:00 PM–5:15 PM</b>	<b>Plenary Session 2</b> <b>INTRINSIC VS. EXTRINSIC CARTILAGE REPAIR</b>	
4:00 PM–4:30 PM	<b>Intrinsic Point of View</b> Ernst Hunziker, MD	
4:30 PM–5:00 PM	<b>Extrinsic Point of View</b> Connie Chu, MD	
5:00 PM–5:15 Pm	<b>Discussion</b>	
<b>5:15 PM–5:45 PM</b>	<b>Break</b>	
<b>5:45 PM–6:15 PM</b>	<b>OPENING CEREMONY / LIFETIME ACHIEVEMENT, BASIC AND CLINICAL AWARD PRESENTATIONS</b>	
<b>6:15 PM–7:00 PM</b>	<b>Keynote Lecture</b> <b>AGING, INFLAMMATION AND OA</b> Martin Lotz, MD	
<b>7:00 PM–8:30 PM</b>	<b>OPENING RECEPTION WITH EXHIBITORS</b>	

## Friday, September 11, 2009

<b>7:15 AM–8:45 AM</b>	<b>Satellite Breakfast Symposium</b> <b>SYNOVITIS: A POTENTIAL PREDICTOR OF OSTEOARTHRITIS PROGRESSION</b> Sponsored by Bioiberica	
<b>7:45 AM–8:45 AM</b>	<b>Breakfast Workshop A</b> <b>BIOMECHANICAL METHODS OF STUDYING JOINT FORCES</b> Thomas Brown, PhD	
	<b>Breakfast Workshop B</b> <b>IMMUNOHISTOCHEMISTRY &amp; CONFOCAL TECHNIQUES</b> Claire Brown, PhD	
<b>9:00 AM–10:30 AM</b>	<b>Plenary Session 3</b> <b>HIGHEST RATED ABSTRACTS FROM YOUNG INVESTIGATORS</b>	
9:00 AM–9:15 AM	<b>003 STRESS-DEPRIVATION UNCOUPLES METALLOPROTEINASE AND INHIBITOR EXPRESSION AND REDUCES MATERIAL PROPERTIES OF DISTINCT TENDON REGIONS</b> J.L. Peterson <sup>1</sup> , M.M. Smith <sup>1</sup> , R.C. Appleyard <sup>2</sup> , C.B. Little <sup>1</sup> <sup>1</sup> Raymond Purves Bone and Joint Res. Lab., The Kolling Inst. of Med. Res., Univ. of Sydney, Royal North Shore Hosp., St Leonards, Australia; <sup>2</sup> Murray Maxwell Biomechanics Lab., The Kolling Inst. of Med. Res., Univ. of Sydney, Royal North Shore Hosp., St Leonards, Australia	p. S10

9:15 AM–9:30 AM	<b>004 TILUDRONATE IN AN EXPERIMENTAL DOG MODEL OF OSTEOARTHRITIS: BONE ANTI-RESORPTIVE ACTIVITY AND RELATED FUNCTIONAL IMPROVEMENT</b> M. Moreau <sup>1</sup> , P. Rialland <sup>1</sup> , J.-P. Pelletier <sup>2</sup> , J. Martel-Pelletier <sup>2</sup> , D. Lajeunesse <sup>2</sup> , C. Boileau <sup>2</sup> , J. Caron <sup>2</sup> , G. Beauchamp <sup>1</sup> , D. Gauvin <sup>1</sup> , E. Troncy <sup>1</sup> <sup>1</sup> GREPAQ - Fac. vet. med. - Université de Montréal, St-Hyacinthe, QC, Canada; <sup>2</sup> Osteoarthritis Res. Unit - Notre-Dame Hosp., CR-CHUM - Université de Montréal, Montréal, QC, Canada	p. S10
9:30 AM–9:45 AM	<b>005 USE OF A NOVEL <i>IN VIVO</i> KNEE JOINT LOADING MODEL TO DETERMINE THE INTERPLAY BETWEEN GENETIC AND MECHANICAL FACTORS IN THE INITIATION AND PROGRESSION OF MURINE OA</b> B. Poulet <sup>1</sup> , R.W. Hamilton <sup>2</sup> , P.D. Lee <sup>2</sup> , S.J. Shefelbine <sup>2</sup> , A.A. Pitsillides <sup>1</sup> <sup>1</sup> The Royal Vet. Coll., London, United Kingdom; <sup>2</sup> Imperial Coll. London, London, United Kingdom	p. S11
9:45 AM–10:00 AM	<b>006 BIOMECHANICAL MODELS EXPLAIN INCREASED RISKS FOR KNEE OSTEOARTHRITIS DUE TO OBESITY AND LIMB ALIGNMENT</b> S. Lancianese, A. Lerner Univ. of Rochester, Rochester, NY	p. S11
10:00 AM–10:15 AM	<b>007 MICRORNA-27b (miR-27b) REGULATES THE EXPRESSION OF MMP-13 IN HUMAN OSTEOARTHRITIS CHONDROCYTES</b> N. Akhtar, Z. Rasheed, A.N. Anbazhagan, S. Ramamurthy, F.R. Voss, T.M. Haqqi Univ. of South Carolina, Columbia, SC	p. S12
10:15 AM–10:30 AM	<b>008 NF-KAPPA B FAMILY MEMBER RELA/P65, A TRANSACTIVATOR OF SOX9, IS ESSENTIAL FOR CHONDROGENIC DIFFERENTIATION AND SKELETAL GROWTH</b> S. Itoh, T. Saito, M. Ushita, T. Ikeda, F. Yano, N. Ogata, U.-i. Chung, K. Nakamura, H. Kawaguchi Sensory & Motor System Med., Univ. of Tokyo, Tokyo, Japan	p. S12
<b>10:30 AM–11:00 AM</b>	<b>OARSI BUSINESS MEETING</b>	
<b>11:30 AM–12:30 PM</b>	<b>Concurrent Session 1</b> <b>BONE &amp; OA</b>	
11:30 AM–12:00 PM	<b>The Role of Bone in the Progression and Development of OA</b> Daniel Lajeunesse, PhD	
12:00 PM–12:15 PM	<b>009 EARLY SUBCHONDRAL PLATE THINNING IN DIFFERENT EXPERIMENTAL CANINE MODELS OF OA IS INTRINSIC TO CARTILAGE DEGENERATION WHILE TRABECULAR CHANGES ARE RELATED TO UNLOADING</b> F. Intema <sup>1</sup> , S.C. Mastbergen <sup>1</sup> , J.W. Bijlsma <sup>1</sup> , H.A. Hazewinkel <sup>2</sup> , H.H. Weinans <sup>3</sup> , F.P. Lafeber <sup>1</sup> <sup>1</sup> Rheumatology & Clin. Immunology UMC Utrecht, Utrecht, Netherlands; <sup>2</sup> Faculty of Vet. Med., Univ. of Utrecht, Utrecht, Netherlands; <sup>3</sup> Orthopaedics, ErasmusMC, Rotterdam, Netherlands	p. S13
12:15 PM–12:30 PM	<b>010 THE UNDERLYING MOLECULAR MECHANISMS OF PRIMARY HIP OSTEOARTHRITIS AND ITS INVERSE RELATIONSHIP WITH FRACTURE COHORTS</b> D.D. Kumarasinghe <sup>1,2</sup> , B. Hopwood <sup>2,3</sup> , G.J. Atkins <sup>3,4</sup> , N.L. Fazzalari <sup>1,2</sup> <sup>1</sup> Discipline of Pathology, Univ. of Adelaide, Adelaide, Australia; <sup>2</sup> Bone & Joint Res. Lab, SA Pathology, Adelaide, Australia; <sup>3</sup> Hanson Inst., SA Pathology, Adelaide, Australia; <sup>4</sup> Discipline of Orthopaedics & Trauma, Univ. of Adelaide, Adelaide, Australia	p. S13
<b>11:30 AM–12:30 PM</b>	<b>Concurrent Session 2</b> <b>EPIDEMIOLOGY AND OA</b>	
11:30 AM–11:45 PM	<b>The Role of Epidemiology in Understanding OA</b> Jeffrey Katz, MD	
11:45 AM–12:00 PM	<b>011 TWO-YEAR INCIDENCE AND PREDICTORS OF FUTURE KNEE ARTHROPLASTY IN PERSONS WITH SYMPTOMATIC KNEE OSTEOARTHRITIS: PRELIMINARY ANALYSIS OF LONGITUDINAL DATA FROM THE OSTEOARTHRITIS INITIATIVE</b> D.L. Riddle <sup>1</sup> , W.A. Jiranek <sup>1</sup> , X. Kong <sup>2</sup> <sup>1</sup> Virginia Commonwealth Univ., Richmond, VA; <sup>2</sup> Johns Hopkins Univ., Baltimore, MD	p. S14
12:00 PM–12:15 PM	<b>012 RISK FOR SYMPTOMATIC KNEE OSTEOARTHRITIS DOES NOT VARY BY KNEE EXTENSOR STRENGTH AND KNEE JOINT POSITION SENSE</b> N.A. Segal <sup>1</sup> , N.A. Glass <sup>1</sup> , D. Felson <sup>2</sup> , M. Hurley <sup>3</sup> , M. Yang <sup>2</sup> , M. Nevitt <sup>4</sup> , C.E. Lewis <sup>5</sup> , J.C. Torner <sup>1</sup>	p. S15

<sup>1</sup>Univ. of Iowa, Iowa City, IA; <sup>2</sup>Boston Univ., Boston, MA; <sup>3</sup>King's Coll. London, London, United Kingdom; <sup>4</sup>Univ. of California at San Francisco, San Francisco, CA; <sup>5</sup>Univ. of Alabama at Birmingham, Birmingham, AL

- 12:15 PM–12:30 PM **013 IMPAIRMENT OF FUNCTION IS THE MAJOR DETERMINANT OF REDUCED HEALTH-RELATED QUALITY OF LIFE IN HAND OSTEOARTHRITIS PATIENTS IN SECONDARY CARE** p. S16  
**W.Y. Kwok**, T.P. Vliet Vlieland, M. Kloppenburg, T.W. Huizinga  
 Leiden Univ. Med. Ctr., Leiden, Netherlands
- 12:30 PM–2:00 PM **Satellite Lunch Symposium**  
**SYMPTOMATIC TREATMENT AND STRUCTURE MODIFICATION IN OA: NOW THE EVIDENCE**  
 Sponsored by IBSA
- 2:00 PM–3:30 PM **Concurrent Session 3**  
**INNATE IMMUNITY & OA**
- 2:00 PM–2:30 PM **Innate Immune System Activation in OA: is OA a Chronic Wound?**  
 Carla Scanzello, MD, PhD
- 2:30 PM–2:45 PM **014 THE ASSOCIATIONS BETWEEN LEPTIN, INTERLEUKIN 6 AND HIP RADIOGRAPHIC OSTEOARTHRITIS IN OLDER PEOPLE** p. S16  
**C. Ding**<sup>1,2</sup>, O. Stannus<sup>1</sup>, F. Cicuttini<sup>2</sup>, D. Dore<sup>1</sup>, G. Jones<sup>1</sup>  
<sup>1</sup>Univ. of Tasmania, Hobart, Australia; <sup>2</sup>Monash Univ., Melbourne, Australia
- 2:45 PM–3:00 PM **015 COMPARISON OF THE EXPRESSION PROFILES OF SYNOVIAL TISSUE INFLAMMATION BETWEEN END-STAGE AND PROGRESSIVE KNEE OSTEOARTHRITIS** p. S17  
 N. Liang<sup>1</sup>, **H. Kaneko**<sup>1</sup>, M. Ishijima<sup>1</sup>, M. Kubota<sup>1</sup>, I. Futami<sup>1</sup>, L. Zu<sup>1</sup>, T. Kawasaki<sup>1</sup>, Y. Takazawa<sup>1</sup>, H. Ikeda<sup>1</sup>, H. Kurihara<sup>2</sup>, E. Arikawa-Hirasawa<sup>3</sup>, H. Kurosawa<sup>1</sup>  
<sup>1</sup>Dept of Orthopaedics, Juntendo Univ., Tokyo, Japan; <sup>2</sup>Dept of Anatomy and Life Structure, Juntendo Univ., Tokyo, Japan; <sup>3</sup>Res. Inst. for Diseases of Old Ages, Juntendo Graduate Sch. of Med., Tokyo, Japan
- 3:00 PM–3:15 PM **016 IL-1 SIGNALS BEYOND THE CANONICAL PATHWAY IN MURINE OA** p. S17  
**S.S. Glasson**, A.R. Jones, M.A. Rivera-Bermudez, T. Blanchet, E.A. Morris  
 Wyeth, Cambridge, MA
- 3:15 PM–3:30 PM **017 INHIBITORY INTERACTIONS BETWEEN HMGB1 AND HEME OXYGENASE-1 PATHWAYS IN OSTEOARTHRITIC SYNOVIOCYTES** p. S18  
**I. García-Arnandis**<sup>1</sup>, I. Guillén<sup>1,2</sup>, M.A. Castejón<sup>3</sup>, M. Alcaraz<sup>1</sup>  
<sup>1</sup>Univ. of Valencia, Dept. Pharmacology, Burjasot, Spain; <sup>2</sup>Cardenal Herrera-CEU Univ., Moncada, Spain; <sup>3</sup>La Ribera Univ. Hosp., Alzira, Spain
- 2:00 PM–3:30 PM **Concurrent Session 4**  
**MEASUREMENT OF OUTCOMES IN OA THERAPY**
- 2:00 PM–2:30 PM **New Approaches to Measurement of Outcomes to Assess Efficacy of OA Treatment**  
 Maxime Dougados, MD
- 2:30 PM–2:45 PM **018 RELATIONSHIP OF WEIGHT CHANGE WITH CHANGE IN KNEE PAIN AND FUNCTION IN PERSONS WITH SYMPTOMATIC RADIOGRAPHIC KNEE OSTEOARTHRITIS: ONE-YEAR FOLLOW-UP DATA FROM THE OSTEOARTHRITIS INITIATIVE** p. S18  
**M.C. Hochberg**<sup>1</sup>, K. Favors<sup>1</sup>, D. Bujak<sup>1</sup>, T. Niculescu<sup>1</sup>, S. Bartlett<sup>2</sup>, J. Bathon<sup>2</sup>, J. Sorkin<sup>1</sup>  
<sup>1</sup>Univ. of Maryland, Baltimore, MD; <sup>2</sup>The Johns Hopkins Univ., Baltimore, MD
- 2:45 PM–3:00 PM **019 THE EFFECT OF LONG-TERM VIGOROUS PHYSICAL ACTIVITY ON KNEE CARTILAGE AMONG ADULTS WITHOUT CLINICAL KNEE DISEASE** p. S19  
 A.J. Teichtahl<sup>1</sup>, **A.E. Wluka**<sup>1</sup>, Y. Wang<sup>1</sup>, A. Forbes<sup>1</sup>, M.L. Davies-Tuck<sup>1</sup>, D.R. English<sup>2,3</sup>, G.G. Giles<sup>3</sup>, F.M. Cicuttini<sup>1</sup>  
<sup>1</sup>Dept. of Epidemiology and Preventive Med., Sch. of Publ. Hlth. and Preventive Med., Monash Univ., Melbourne, Australia; <sup>2</sup>Ctr. for Molecular, Environmental, Genetic and Analytic Epidemiology, Sch. of Population Hlth., Univ. of Melbourne, Melbourne, Australia; <sup>3</sup>Cancer Epidemiology Ctr., The Cancer Council Victoria, Melbourne, Australia

3:00 PM–3:15 PM	<b>020 DETERMINANTS OF LONG-TERM RADIOGRAPHIC AND CLINICAL PROGRESSION OF HAND OSTEOARTHRITIS</b> <b>J. Bijsterbosch</b> , I. Watt, I. Meulenbelt, F.R. Rosendaal, T.W. Huizinga, M. Kloppenburg <i>Leiden Univ. Med. Ctr., Leiden, Netherlands</i>	p. S19
3:15 PM–3:30 PM	<b>021 PAIN IMPROVEMENTS FOLLOWING TOTAL JOINT REPLACEMENT: WHAT YOU MEASURE MATTERS</b> <b>A.M. Davis</b> <sup>1</sup> , L.S. Lohmander <sup>2</sup> , R. Wong <sup>1</sup> , V. Venkataramanan <sup>1</sup> , G.A. Hawker <sup>3</sup> <sup>1</sup> Toronto Western Res. Inst., Toronto, ON, Canada; <sup>2</sup> Univ. Hosp. in Lund, Lund, Sweden; <sup>3</sup> Women's Coll. Hosp., Toronto, ON, Canada	p. S19
<b>3:30 PM–5:00 PM</b>	<b>POSTER SESSION 1</b> Including Moderated Poster Session – Presentations by Young Investigators / Students	
<b>5:00 PM–6:30 PM</b>	<b>Concurrent Session 5</b> <b>GENETICS/EPIGENETICS AND CARTILAGE DEGENERATION</b>	
5:00 PM–5:30 PM	<b>Advances in Understanding the Role of Genetics in OA</b> <i>Ele Zeggini, PhD</i>	
5:30 PM–6:00 PM	<b>Epigenetics and Cartilage Degeneration</b> <i>Helmtrud Roach, PhD</i>	
6:00 PM–6:15 PM	<b>022 FOLLOW-UP ANALYSIS OF THE ROLE OF GENETIC VARIATION IN ADAMTS14 IN OSTEOARTHRITIS SUSCEPTIBILITY</b> <b>A. Gonzalez</b> <sup>1</sup> , C. Rodriguez-Fontela <sup>1</sup> , M. Calaza <sup>1</sup> , A. Carr <sup>2</sup> , M. Doherty <sup>3</sup> , J.J. Gomez-Reino <sup>1,4</sup> , J. Loughlin <sup>5</sup> , T. Spector <sup>6</sup> , A. Tsezou <sup>7</sup> , A.M. Valdes <sup>6</sup> <sup>1</sup> Hosp. Clinico Univ.rio de Santiago, Santiago de Compostela, Spain; <sup>2</sup> Nuffield Orthopaedic Ctr., Oxford, United Kingdom; <sup>3</sup> Univ. of Nottingham, Nottingham, United Kingdom; <sup>4</sup> Univ. of Santiago de Compostela, Santiago de Compostela, Spain; <sup>5</sup> Newcastle Univ., Newcastle upon Tyne, United Kingdom; <sup>6</sup> St. Thomas Hosp. Campus, Kings Coll., London Sch. of Med., London, United Kingdom; <sup>7</sup> Univ. of Thessaly, Larissa, Greece	p. S20
6:15 PM–6:30 PM	<b>023 META-ANALYSIS OF GENOME-WIDE ASSOCIATION STUDIES OF OSTEOARTHRITIS</b> E. Evangelou <sup>1</sup> , <b>A.M. Valdes</b> <sup>2</sup> , U. Styrkársdóttir <sup>3</sup> , H. Kerkhof <sup>4</sup> , I. Jonsdottir <sup>3</sup> , A. Uitterlinden <sup>4</sup> , Y. Zhu <sup>5</sup> , A. Cupples <sup>6</sup> , J.P. Ioannidis <sup>1</sup> , K. Stefansson <sup>3</sup> , D. Felson <sup>5</sup> , J. Van Meurs <sup>4</sup> , T.D. Spector <sup>2</sup> <sup>1</sup> Dept. of Hygiene and Epidemiology, Univ. of Ioannina, Ioannina, Greece; <sup>2</sup> King's Coll. London, London, United Kingdom; <sup>3</sup> deCODE genetics, Reykjavik, Iceland; <sup>4</sup> Dept. of Epidemiology, Erasmus Med. Ctr., Rotterdam, Netherlands; <sup>5</sup> Boston Univ. Sch. of Med., Boston, MA; <sup>6</sup> Boston Univ. Sch. of Publ. Hlth., Boston, MA	p. S21
<b>5:00 PM–6:30 PM</b>	<b>Concurrent Session 6</b> <b>MUSCLE STRENGTH, PROPRIOCEPTION &amp; OA</b>	
5:00 PM–5:30 PM	<b>Advances in Understanding the Role of Muscle Strength and Proprioception in the Development and Progression of OA</b> <i>Neil Segal, MD</i>	
5:30 PM–5:45 PM	<b>024 EXERCISE OR NOT TO EXERCISE: A GENOME WIDE ANALYSIS OF EFFECTS OF EXERCISE ON EARLY AND LATE OA</b> P. Perera, J. Nam, J. Frieznier, <b>S. Agarwal</b> <i>The Ohio State Univ., Columbus, OH</i>	p. S21
5:45 PM–6:00 PM	<b>025 GAMMA-LOOP DYSFUNCTION CONTRIBUTES TO QUADRICEPS INHIBITION IN PATIENTS WITH KNEE JOINT OSTEOARTHRITIS</b> D. Rice, <b>P.J. McNair</b> , G. Lewis <i>Auckland Univ. of Technology, Auckland, New Zealand</i>	p. S22
6:00 PM–6:15 PM	<b>026 PAIN, FUNCTION AND MUSCLE STRENGTH IN MENISCECTOMIZED PATIENTS AT HIGH RISK OF OA COMPARED TO AGE- AND GENDER MATCHED CONTROLS</b> <b>J.B. Thorlund</b> , P. Aagaard, E.M. Roos <i>Inst. of Sports Sci. and Clinical Biomechanics, Univ. of Southern Denmark, Odense M, Denmark</i>	p. S22
6:15 PM–6:30 PM	<b>027 KNEE STRENGTH PREDICTS LOSS OF FUNCTION AND DECLINE IN PHYSICAL ACTIVITY IN PARTICIPANTS WITH OSTEOARTHRITIS: A 2-YR FOLLOW-UP OF THE OAI STUDY</b> <b>F. Haq</b> , M. Gurcan, K. Powell, R.D. Jackson, J. Prescott, M. Swanson, T.M. Best <i>Ohio State Univ. Med. Ctr., Columbus, OH</i>	p. S23

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**Saturday, September 12, 2009**

- 7:45 AM–8:45 AM      Breakfast Workshop C**  
**DESIGNING AN OA CLINICAL TRIAL**  
*Jean-Pierre Pelletier, MD*
- 7:45 AM–8:45 AM      Breakfast Workshop D**  
**HOW TO USE MESENCHYMAL STEM CELLS IN OA RESEARCH**  
*Christian Jorgensen, MD*
- 9:00 AM–10:30 AM      Concurrent Session 7**  
**CLINICAL IMPLICATIONS OF MODERN IMAGING TECHNOLOGIES**
- 9:00 AM–9:30 AM      **Strategies to Use Modern Imaging Technologies to Evaluate Patients with OA**  
*Flavia Cicuttini, MD, MBBS*
- 9:30 AM–9:45 AM      **028 OPTICAL COHERENCE TOMOGRAPHY (OCT) AND QUANTITATIVE MRI SHOW EARLY SUBSURFACE MATRIX DEGENERATION IN HUMAN ARTICULAR CARTILAGE** p. S23  
**D.M. Bear, A. Williams, Y. Qian, C.R. Chu**  
*Univ. of Pittsburgh, Pittsburgh, PA*
- 9:45 AM–10:00 AM      **029 TEMPORAL STRUCTURAL CHANGES IN HIP OA DETECTED BY SHAPE AND APPEARANCE MODELLING OF DXA IMAGES: A ONE-YEAR PROSPECTIVE LONGITUDINAL STUDY** p. S24  
**K. Yoshida<sup>1</sup>, J.S. Gregory<sup>1</sup>, R.J. Barr<sup>1</sup>, S. Alesci<sup>2</sup>, R.M. Aspden<sup>1</sup>, D.M. Reid<sup>1</sup>**  
<sup>1</sup>*Univ. of Aberdeen, Aberdeen, United Kingdom;* <sup>2</sup>*Discovery Translational Med., Wyeth Res., Collegeville, PA*
- 10:00 AM–10:15 AM      **030 RADIAL MRI AND 3D dGEMRIC IN DEVELOPMENTAL DYSPLASIA OF THE HIP AND IN FEMOROACETABULAR IMPINGEMENT** p. S24  
**S.E. Domayer<sup>1</sup>, I. Kress<sup>1</sup>, J. Chan<sup>1</sup>, T.C. Mamisch<sup>2</sup>, Y.-J. Kim<sup>1</sup>**  
<sup>1</sup>*Children's Hosp. Boston, Boston, MA;* <sup>2</sup>*Dept. of Orthopedics, Bern, Switzerland*
- 10:15 AM–10:30 AM      **031 RELATIONSHIP BETWEEN MENISCUS VOLUME AND CARTILAGE MORPHOLOGY IN MR IMAGES OF OSTEOARTHRITIS PATIENTS** p. S25  
**J.W. Prescott, M.S. Swanson, K. Hoang, M. Pennell, F. Haq, T.M. Best, R.D. Jackson, M.N. Gurcan**  
*Ohio State Univ., Columbus, OH*
- 9:00 AM–10:30 AM      Concurrent Session 8**  
**AGING OF CELLS & MATRIX**
- 9:00 AM–9:30 AM      **Advances in the Understanding of the Role of Aging in the Development and Progression of OA**  
*Jochen Haag, PhD*
- 9:30 AM–9:45 AM      **032 A REDUCTION IN SIRT1 LEVELS IN OA ARTICULAR CARTILAGE IS ASSOCIATED WITH AN INCREASE IN PTP1B, MMP13 AND CHONDROCYTE APOPTOSIS** p. S26  
**O. Gabay, V. Gagarina, E. Lee, M. Dvir-Ginzberg, J. Onodera, D. Hall Sr**  
*NIH, Bethesda, MD*
- 9:45 AM–10:00 AM      **033 OXIDIZED LDL INDUCES STRESS-INDUCED PREMATURE SENESENCE IN CULTURED BOVINE ARTICULAR CHONDROCYTES** p. S26  
**M. Akagi, S. Zushi, H. Kishimoto, T. Teramura, S. Nishimura, C. Hamanishi**  
*Kinki Univ. Sch. of Med., Osaka-Sayama City, Japan*
- 10:00 AM–10:15 AM      **034 REDUCTION IN ARTICULAR CARTILAGE LESIONS IN OLDER ADULT MICE OVEREXPRESSING CATALASE TARGETED TO MITOCHONDRIA** p. S27  
**R.F. Loeser<sup>1</sup>, M.A. McNulty<sup>2</sup>, P.M. Treuting<sup>3</sup>, C.S. Carlson<sup>2</sup>**  
<sup>1</sup>*Wake Forest Univ. Sch. of Med., Winston Salem, NC;* <sup>2</sup>*Univ. of Minnesota Coll. of Vet. Sci., St. Paul, MN;* <sup>3</sup>*Univ. of Washington, Seattle, WA*
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10:15 AM–10:30 AM	<b>035 EFFECTS OF INORGANIC PYROPHOSPHATE ON CHONDROCYTE RESPONSE WHEN ENCAPSULATED IN 3D SYNTHETIC HYDROGELS</b> <b>N. Bishop<sup>1</sup>, M. Kissler<sup>1</sup>, M. Husa<sup>2</sup>, R. Terkeltaub<sup>2</sup>, S. Bryant<sup>1</sup></b> <sup>1</sup> Univ. of Colorado, Boulder, CO; <sup>2</sup> VA Med. Ctr. San Diego, San Diego, CA	p. S27
<b>11:00 AM–12:30 PM</b>	<b>Concurrent Session 9</b> <b>PAIN TARGETS IN OA</b>	
11:00 AM–11:30 AM	<b>New Strategies for Treating Pain in Patients with OA</b> <i>Richard Leff, MD</i>	
11:30 AM–11:45 PM	<b>036 DEVELOPMENT OF RADIOLOGICAL OSTEOARTHRITIS PATHOLOGY AT FOLLOW-UP IN PEOPLE WITH JOINT PAIN AT BASELINE</b> <b>B.M. de Klerk, D. Schiphof, B.W. Koes, S.M. Bierma-Zeinstra</b> <i>Erasmus Univ. Med. Ctr., Rotterdam, Netherlands</i>	p. S28
11:45 AM–12:00 PM	<b>037 A TOOL THAT IDENTIFIES NEUROPATHIC PAIN SYMPTOMS IN A COMMUNITY KNEE OA COHORT</b> <b>J. Hochman<sup>1,2</sup>, D. Sutton<sup>1</sup>, M. French<sup>1</sup>, L. Gagliese<sup>3</sup>, A. Davis<sup>4</sup>, G. Hawker<sup>1,2</sup></b> <sup>1</sup> Women's Coll. Hosp., Toronto, ON, Canada; <sup>2</sup> Univ. of Toronto, Toronto, ON, Canada; <sup>3</sup> Univ. Hlth. Network, Toronto, ON, Canada; <sup>4</sup> Toronto Western Res. Inst., Toronto, ON, Canada	p. S28
12:00 PM–12:15 PM	<b>038 PERIPHERAL EFFECTS OF ENDOGENOUS LIGANDS IN THE RAT INFLAMED JOINT MODEL</b> <b>L. Mécs, K. Tóth, K. Wellinger, G. Tuboly, G. Kékesi, G. Horváth</b> <i>Univ. of Szeged, Szeged, Hungary</i>	p. S29
12:15 AM–12:30 PM	<b>039 VALIDITY OF PAIN ASSESSMENT METHODS IN THE EXPERIMENTAL DOG POND-NUKI MODEL</b> <b>P. Rialland<sup>1</sup>, M. Moreau<sup>1</sup>, J.-P. Pelletier<sup>2</sup>, J. Martel-Pelletier<sup>2</sup>, D. Lajeunesse<sup>2</sup>, C. Boileau<sup>2</sup>, J. Caron<sup>2</sup>, G. Beauchamp<sup>1</sup>, D. Gauvin<sup>1</sup>, E. Troncy<sup>1</sup></b> <sup>1</sup> GREPAQ - Fac. vet. med. - Université de Montréal, St-Hyacinthe, QC, Canada; <sup>2</sup> Osteoarthritis Res. Unit - Notre-Dame Hosp., CR-CHUM - Université de Montréal, Montréal, QC, Canada	p. S29
<b>11:00 AM–12:30 PM</b>	<b>Concurrent Session 10</b> <b>DEBATE: DIFFERENT OA PHENOTYPES</b>	
11:00 AM–11:25 PM	<b>Basic Science Studies of OA Phenotypes: Their Role in Understanding the Development and Progression of OA</b> <i>Steven Abramson, MD</i>	
11:25 AM–11:50 PM	<b>Distinct Clinical Phenotypes of OA</b> <i>Wolfgang Ruether, MD</i>	
11:50 AM–12:15 PM	<b>Identifying Different OA Phenotypes Through Epidemiologic Research</b> <i>David Felson, MD, MPH</i>	
12:15 PM–12:30 PM	<b>15 minute DISCUSSION</b>	
<b>12:30 PM–1:30 PM</b>	<b>Educational Workshop for Young Investigators</b> <b>HOW TO PRESENT A TALK: GUIDANCE FOR THE NEW INVESTIGATOR</b> <i>Linda Sandell, PhD</i>	
<b>12:45 PM–2:15 PM</b>	<b>Satellite Lunch Symposium</b> <b>NEW PARADIGMS IN THE TREATMENT OF OSTEOARTHRITIS PATIENTS WITH HYPERTENSION</b> <i>Sponsored by NicOx</i>	
<b>2:15 PM–3:30 PM</b>	<b>Concurrent Session 11</b> <b>SURGICAL METHODS OF STIMULATING RESTORATION OF JOINT SURFACES: OSTEOTOMIES AND JOINT DISTRACTION</b>	
2:15 PM–2:30 PM	<b>Surgical Methods of Restoring an Articular Surface in Osteoarthritic Joints</b> <i>Bert Mandelbaum, MD</i>	

2:30 PM–2:45 PM	<b>Use of Animal Models to Develop Surgical Methods of Stimulating Restoration of Joint Surfaces in Osteoarthritic Joints</b> <i>Floris Lafeber, PhD</i>	
2:45 PM–3:00 PM	<b>040 INJECTION OF ALLOGENEIC IMMUNOSELECTED STRO-3+ MESENCHYMAL PRECURSOR STEM CELLS INTO LUMBAR INTERVERTEBRAL DISCS ATTENUATES DEGENERATION AND PROMOTES THE RESTORATION OF THE DISC EXTRACELLULAR MATRIX. AN EXPERIMENTAL STUDY IN AN OVINE MODEL OF DISC DEGENERATION</b> <b>P. Ghosh</b> <sup>1</sup> , S. Itescu <sup>1</sup> , R. Moore <sup>2</sup> , B. Vernon-Roberts <sup>2</sup> , T. Goldschlager <sup>3</sup> , A. Zannettino <sup>2</sup> , S. Gronthos <sup>2</sup> , C. Little <sup>4</sup> , C. Shu <sup>4</sup> , J. Melrose <sup>4</sup> <sup>1</sup> Mesoblast Ltd, Melbourne, Australia; <sup>2</sup> Inst. of Vet. and Med. Sci., Adelaide, Australia; <sup>3</sup> Monash Univ., Melbourne, Australia; <sup>4</sup> Univ. of Sydney, Sydney, Australia	p. S30
3:00 PM–3:15 PM	<b>041 CARTILAGE RESTORATION AFTER HIGH TIBIAL OSTEOTOMY</b> <b>G. Spahn</b> <sup>1</sup> , G.O. Hofmann <sup>2</sup> <sup>1</sup> Ctr. of Traumatology and Orthopaedic Surgery, Eisenach, Germany; <sup>2</sup> Ctr. of Trauma Univ. of Jena and Trauma Ctr. Halle, Jena and Halle, Germany	p. S30
3:15 PM–3:30 PM	<b>042 SUBCHONDRAL BONE DENSITY CHANGES MAY PARTLY EXPLAIN THE CLINICAL BENEFIT OF JOINT DISTRACTION IN TREATMENT OF ADVANCED ANKLE OA</b> <b>F. Intema</b> <sup>1</sup> , T.P. Thomas <sup>2</sup> , D.D. Anderson <sup>2</sup> , J.M. Elkins <sup>2</sup> , F.P. Lafeber <sup>1</sup> , T.D. Brown <sup>2</sup> , A. Amendola <sup>2</sup> , C.L. Saltzman <sup>3</sup> <sup>1</sup> Rheumatology & Clin. Immunology, UMC Utrecht, Utrecht, Netherlands; <sup>2</sup> The Univ. of Iowa, Iowa City, IA; <sup>3</sup> The Univ. of Utah, Salt Lake City, UT	p. S31
<b>2:15 PM–3:30 PM</b>	<b>Concurrent Session 12</b> <b>INFLAMMATION AND OA: THE ROLE OF ADIPOKINES</b>	
2:15 PM–2:45 PM	<b>Understanding the Role of Inflammation in OA</b> <i>Francis Berenbaum, MD, PhD</i>	
2:45 PM–3:00 PM	<b>043 IN VIVO EVIDENCE OF THE IMPLICATION OF PROTEINASE-ACTIVATED RECEPTOR (PAR)-2 IN CARTILAGE DEGRADATION IN A MOUSE MODEL OF OSTEOARTHRITIS</b> <b>N. Amiable</b> <sup>1</sup> , J. Martel-Pelletier <sup>1</sup> , J.-P. Pelletier <sup>1</sup> , B. Lussier <sup>2</sup> , F. Paré <sup>1</sup> , S. Tremblay <sup>1</sup> , <b>C. Boileau</b> <sup>1</sup> <sup>1</sup> Osteoarthritis Res. Unit, Notre-Dame Hosp., Univ. of Montreal Hosp. Res. Ctr. (CRCHUM), Montreal, QC, Canada; <sup>2</sup> Dept. of Vet. Med., Clinical Sci., Univ. of Montreal, St-Hyacinthe, QC, Canada	p. S32
3:00 PM–3:15 PM	<b>044 EFFICACY OF CHONDROITIN SULPHATE ON SYNOVITIS IN PATIENTS WITH KNEE OSTEOARTHRITIS: AN ULTRASOUND STUDY</b> <b>I. Möller</b> <i>Inst. Poal de Reumatología, Barcelona, Spain</i>	p. S32
3:15 PM–3:30 PM	<b>045 SERUM LEVELS OF INFLAMMATORY MARKERS, KNEE RADIOGRAPHIC OSTEOARTHRITIS, AND KNEE CARTILAGE LOSS IN OLDER ADULTS</b> <b>C. Ding</b> <sup>1,2</sup> , F. Cicuttini <sup>3</sup> , V. Parameswaran <sup>4</sup> , O. Stannus <sup>1</sup> , J. Burgess <sup>1</sup> , G. Jones <sup>1</sup> <sup>1</sup> Univ. of Tasmania, Hobart, Australia; <sup>2</sup> Monash Univ., Melbourne, Australia; <sup>3</sup> Monash Univ., Melbourne, Australia; <sup>4</sup> Royal Hobart Hosp., Hobart, Australia	p. S33
<b>3:30 PM–5:00 PM</b>	<b>POSTER SESSION 2</b>	
<b>5:00 PM–6:00 PM</b>	<b>Concurrent Session 13</b> <b>BIO PSYCHOSOCIAL ASPECTS IN OA</b>	
5:00 PM–5:20 PM	<b>Coping with Arthritis Pain: Current Trends and Future Directions</b> <i>Francis Keefe, PhD</i>	
5:20 PM–5:40 PM	<b>Sleep and Pain Interaction: A Circular Problem?</b> <i>Gilles Lavigne, PhD, DMD</i>	
5:45 PM–6:00 PM	<b>046 RACIAL DIFFERENCES IN OSTEOARTHRITIS PAIN AND FUNCTION: POTENTIAL EXPLANATORY FACTORS</b> <b>K.D. Allen</b> <sup>1,2</sup> , E.Z. Oddone <sup>1,2</sup> , C.J. Coffman <sup>1,2</sup> , F.J. Keefe <sup>2</sup> , J.H. Lindquist <sup>1</sup> , H.B. Bosworth <sup>1,2</sup> <sup>1</sup> Durham VA Med. Ctr., Durham, NC; <sup>2</sup> Duke Univ. Med. Ctr., Durham, NC	p. S33



<b>5:00 PM–6:00 PM</b>	<b>Concurrent Session 14</b> <b>CELL MATRIX INTERACTIONS</b>	
5:00 PM–5:30 PM	<b>Update on Matrix Degradation: Role of Matrix Degradation in OA</b> <i>Chris B. Little, PhD, BVMS</i>	
5:30 PM–5:45 PM	<b>047 DIFFERENTIAL REGULATION OF THE INSULIN-LIKE GROWTH FACTOR BINDING PROTEIN-5 AND MATRIX METALLOPROTEASE-13 GENES BY THE MICRORNAS MIR-140 AND MIR-27A IN HUMAN OSTEOARTHRITIC CHONDROCYTES</b> <i>G. Tardif<sup>1</sup>, D. Hum<sup>1</sup>, J.-P. Pelletier<sup>1</sup>, N. Duval<sup>2</sup>, J. Martel-Pelletier<sup>1</sup></i> <i><sup>1</sup>Osteoarthritis Res. Unit, Notre-Dame Hosp., Univ. of Montreal Hosp. Res. Ctr. (CRCHUM), Montreal, QC, Canada; <sup>2</sup>Duval Clinique Orthopédique, Le Pavillon des Charmilles, Laval, QC, Canada</i>	p. S33
5:45 PM–6:00 PM	<b>048 EVIDENCE FOR A ROLE OF DICKOPF-3 IN THE PATHOGENESIS OF OSTEOARTHRITIS</b> <i>S. Snelling<sup>1</sup>, R.K. Davidson<sup>2</sup>, T.E. Swingle<sup>2</sup>, I. Clark<sup>2</sup></i> <i><sup>1</sup>Univ. of Oxford, Oxford, United Kingdom; <sup>2</sup>Univ. of East Anglia, Norwich, United Kingdom</i>	p. S34
<b>7:00 PM–10:00 PM</b>	<b>CONGRESS DINNER</b>	

## Sunday , September 13, 2009

<b>7:45 AM–8:45 AM</b>	<b>Breakfast Workshop E</b> <b>CLINICAL APPLICATIONS OF GAIT ANALYSIS</b> <i>Monica Maly, PT, PhD</i>	
<b>7:45 AM–8:45 AM</b>	<b>Breakfast Workshop F</b> <b>ANIMAL HISTOPATHOLOGY</b>  <b>Dog</b> – Keiichi Kuroki, DVM, PhD <b>Rat</b> – Nicole Gerwin, PhD	
<b>9:00 AM–10:30 AM</b>	<b>Concurrent Session 15</b> <b>POST-TRAUMATIC OA</b>	
9:00 AM–9:30 AM	<b>New Understanding of the Role of Joint Injury in the Development of OA</b> <i>Martin Lotz, MD</i>	
9:30 AM–9:45 AM	<b>049 JOINT INJURY LEADS TO SIGNIFICANTLY INCREASED AGGRECANASE ACTIVITY IN HUMANS AND PRECLINICAL ANIMAL MODELS</b> <i>P.S. Chockalingam<sup>1</sup>, W. Sun<sup>1</sup>, M. Rivera-Bermudez<sup>1</sup>, S. Glasson<sup>1</sup>, J. Lee<sup>1</sup>, S. Larsson<sup>2</sup>, L.S. Lohmander<sup>2</sup>, K.E. Georgiadis<sup>1</sup>, E.A. Morris<sup>1</sup></i> <i><sup>1</sup>Wyeth Res., Cambridge, MA; <sup>2</sup>Dept. of Orthopedics, Clinical Sci. Lund, Lund University, Sweden</i>	p. S34
9:45 AM–10:00 AM	<b>050 COMP IN POSTTRAUMATIC OA</b> <i>E. Lindhorst<sup>1</sup>, R. Raiss<sup>2</sup>, A. Theisen<sup>2</sup>, F. Hentschel<sup>2</sup>, T. Aigner<sup>3</sup>, L. Wachsmuth<sup>4</sup></i> <i><sup>1</sup>Univ. of Bochum, Univ. of Marburg, Univ. of Frankfurt/Main, Bochum, Germany; <sup>2</sup>Univ. of Frankfurt/Main, Frankfurt/Main, Germany; <sup>3</sup>Univ. of Leipzig, Univ. of Erlangen, Leipzig, Germany; <sup>4</sup>Univ. of Erlangen, Erlangen, Germany</i>	p. S35
10:00 AM–10:15 AM	<b>051 PREVALENCE AND INCIDENCE OF POST-TRAUMATIC OSTEOARTHRITIS IN THE POPULATION OF THE PROVINCE OF QUEBEC</b> <i>J. Vaillancourt, J. Sampalis</i> <i>McGill Univ. and JSS Med. Res., Montreal, QC, Canada</i>	p. S35
10:15 AM–10:30 AM	<b>052 OPTICAL COHERENCE TOMOGRAPHY (OCT) SIGNAL CHANGES ARE POTENTIAL BIOMARKERS OF ACUTE CARTILAGE INJURY</b> <i>D.M. Bear, M. Szczodry, S. Kramer, P. Smolinski, C.R. Chu</i> <i>Univ. of Pittsburgh, Pittsburgh, PA</i>	p. S36

<b>9:00 AM–10:30 AM</b>	<b>Concurrent Session 16</b>	
	<b>TARGETING SIGNALING PATHWAYS</b>	
9:00 AM–9:30 AM	<b>Targeting Signaling Pathways in Developing New Treatments for OA</b> <i>Frank Beier, PhD</i>	
9:30 AM–9:45 AM	<b>053 REACTIVE OXYGEN SPECIES INHIBIT IGF-I INDUCTION OF CHONDROCYTE PROTEOGLYCAN SYNTHESIS THROUGH DIFFERENTIAL REGULATION OF PI-3 KINASE-AKT AND MEK-ERK MAPK SIGNALING PATHWAYS</b> <b>R.F. Loeser</b> , W. Yin <i>Wake Forest Univ. Sch. of Med., Winston Salem, NC</i>	p. S36
9:45 AM–10:00 AM	<b>054 EXTRACELLULAR SULFATASES SUPPORT CARTILAGE HOMEOSTASIS BY REGULATING BMP AND FGF SIGNALING PATHWAYS</b> <b>S. Otsuki</b> <sup>1</sup> , S. Miyaki <sup>1</sup> , S.P. Grogan <sup>1</sup> , H. Asahara <sup>1</sup> , M. Kinoshita <sup>2</sup> , M.K. Lotz <sup>1</sup> <sup>1</sup> <i>The Scripps Res. Inst., La Jolla, CA;</i> <sup>2</sup> <i>Osaka Med. Coll., Osaka, Japan</i>	p. S37
10:00 AM–10:15 AM	<b>055 HYPOXIA CONDITIONS DIFFERENTIALLY MODULATE NORMAL AND OSTEOARTHRITIC HUMAN ARTICULAR CHONDROCYTE PROTEOMES</b> V. Carreira, C. Ruiz-Romero, J. Mateos, V. Calamia, B. Cillero-Pastor, P. Fernandez-Puente, F. Galdo, <b>F.J. Blanco</b> <i>Osteoarticular and Aging Res. Lab. Proteomics Unit Associated Node to ProteoRed, INIBIC-Complejo Hosp. Univ. A Coruña, A Coruña, Spain</i>	p. S37
10:15 AM–10:30 AM	<b>056 ALTERED WNT/b-CATENIN SIGNALING IN HUMAN OSTEOARTHRITIC SUBCHONDRAL OSTEOBLASTS IS DUE TO DICKKOPF-2 (DKK2) AND PROSTAGLANDIN E2 (PGE2) LEVELS</b> <b>T.F. Chan</b> , D. Couchourel, A. Delalandre, D. Lajeunesse <i>CRCHUM, Hôpital Notre-Dame, Montréal, QC, Canada</i>	p. S38
<b>10:45 AM–12:15 AM</b>	<b>Plenary Session 4</b>	
	<b>OA YEAR IN REVIEW</b>	
	<b>Genetics</b> <i>Kay Chapman, PhD</i>	
	<b>Imaging</b> <i>Phil Conaghan, MD, PhD, FRACP, FRCP</i>	
	<b>Cell Biology</b> <i>Anna Plaas, PhD</i>	
	<b>Clinical Trials</b> <i>Jean-Pierre Raynauld, MD, FRCPC</i>	
	<b>Biomarkers</b> <i>Linda Sandell, PhD</i>	
	<b>Biomechanics</b> <i>Alan Grodzinsky, ScD</i>	